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Why Not Sell
That Appliance
Which Benefits

Your Company

As Well As

Your Customers

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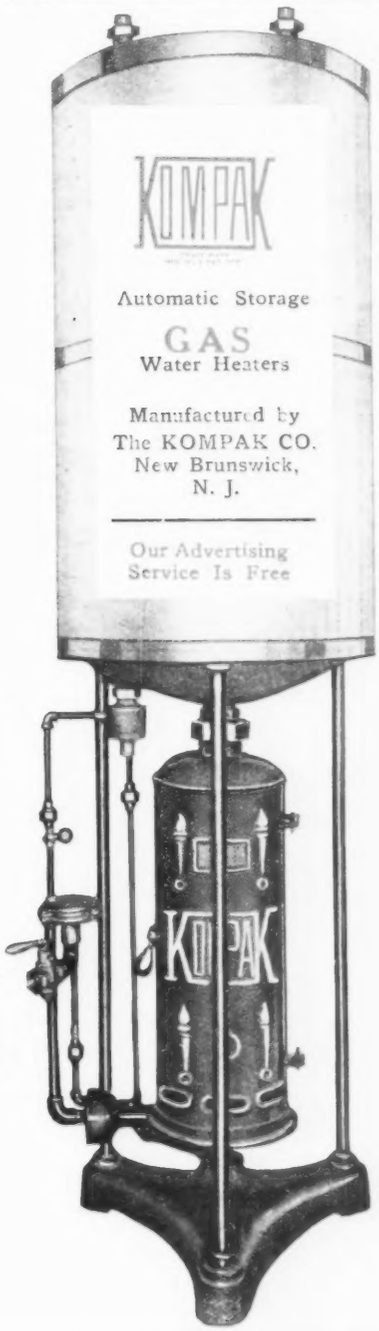

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With the Price of Gas Such as to Return a Profit on Its Manufacture Profit on the Appliance Idea Will Be Adopted Only if It Actually Promotes the Aggregate Sale

Gas Man's Specialty and Predominate Interest His Own Product — Impossible That He Should View the Appliance as Anything More Than a Means to an End

By E. D. CARPENTER

At some period in the World's history the community conceded that the manufacturer of shoes was entitled to a profit on his product. So also the manufacturer of pens and pins, of woolens and silks, of stoves and furnaces, and so on indefinitely. At this moment we seem to have arrived at the point where the community may at any time concede that the gas manufacturer is entitled to a profit on *his* product.

Hitherto one put the soft pedal on the word "profit" when discussing gas supply. Profits in this business have been looked upon with suspicion and doubt.

Transient Periods

It is true that there have been times and instances where gas companies made a profit on their product, though only in the interval from the date of a reduction in rates up to the time when the mayor or mayorality aspirant or some other disinterested individual discovered that the gas company, by dint of brain rocking improvements in efficiencies, and despite the rate reduction, was managing to pay a dividend.

But in such intervals we were very much interested in selling all the gas we could. Our main object in selling appliances was to increase the gas demand.

It was only when the cost of making gas alone came so close to the total sum it was being sold for that even the most superficial could recognize that, adding on distributing expense, there was a loss rather than a profit in increased loads that we began to give ear to those gentry who wanted us to be real storekeepers and make a profit on the appliances we sold.

Now We May Speak Frankly Without Fear of Reproach

Now that making a profit on the gas we sell will probably be publicly recognized and acknowledged as a moral and respectable aspiration it is quite likely that we may again incline to relegating these "profit on the apliance" advocates back to the obscurity that war-caused conditions, for the time being, rescued them from.

Profit on the Appliance Idea Not Popular With the Gas Man

The profit on the appliance idea is not popular with the gas man. Gas is his product; the child of his toil. Appliances are a sort of step-son he has taken on not because of affection, but as a means to an end.

In this respect he may be accused of being of a one-track mind, but this is not necessarily a reproach. We are all familiar with the warning as to being a Jack of All Trades. Now and then we do hear of freaks who are expert in many callings—the fiction writer who is eminent also as an engineer or surgeon—but the great majority of big successes are firms or individuals who have specialized on one thing and devoted their whole minds to developing that product.

Gasoline wasn't much until the advent of the automobile. Perhaps oil interests might have helped along with the first motor car companies formed, but it is certain that oil refineries to-day are interesting themselves greatly in getting higher percentages of gasoline

from the crude and little, if any, to the sale of motor cars, their appliances for usage.

So it is my belief, now that the time is coming when there is going to be a profit in the cubic foot of gas sold, the gas man is going to concern himself less and less with the profit on the appliance, except in so far as putting a substantial profit on it might make for more appliances sold.

Up to recently—and it will be the same in the future—the gas man's interest in equipping a place with appliances was to promote the use of gas.

POLICY THAT DIDN'T WORK OUT AS EXPECTED TO

As a means to this end he once adopted the policy of making appliances cheap by sacrificing his profit on the assumption that this made for greater sales.

It did so far as the gas company's sales were concerned, but it is probable that, so far as aggregate sales in the community were concerned, such a policy led to lesser sales.

It drove the plumber, the hardware store, etc., out of the gas appliance business.

Now as a general proposition it is not undesirable that there be other agencies for the sale of appliances than the gas company.

Some plumbers are all that many of us have said they are. But the majority of plumbers as well as the majority of others who aspire to success are conscientious men who feel a responsibility to others as well as to themselves.

Instead of promoting the use of gas in a community by selling appliances without profit actual test would doubtless show that we are holding it back. It might well be that greater increases in gas consumption would return to the gas company by maintaining the highest prices in town on appliances rather than the lowest.

Such a policy would hold down our total sales in merchandise, but it would not eliminate entirely our merchandising department.

The assumption would be, of course, that in adopting such a policy we would not do so at the cost of becoming profiteers.

We would not sell the fifty-dollar range, for instance, at a hundred per cent profit. We would attain our object by seling the hundred-dollar range that to the superficial glance would appear very much alike to the fifty-dollar range—a super-quality range whose goodness lies deeper than the glance can detect—at a profit that is merely reasonable.

Merchandising appliances never has been or never will be a congenial side line of gas company activity.

It is something that the gas manager has instinctively looked upon with distaste and taken up with reluctance—as a consequence something he has almost generally handled with varying degrees of incompetence.

But even if outside and independent agencies could be depended upon to sell the maximum in the way of gas-using appliances that the community could absorb a merchandising department in the gas company would still be a necessity. The gas company has too much at stake in the matter of the quality of the appliances that go on its lines to be without some club to enforce conscientious dealings in such matters with its consumers.

The profit on the appliance is in itself of little more than academic interest to the gas company. Whether it should charge it or not is aside from the question of side line revenue and should be decided pro and con on the basis of how it affects consumption of gas.

Gaseous Ignition by Hot Wires

From an examination of the behaviour of wires of platinum, nickel, iron, tungsten, molybdenum, gold and silver, heated by electric current in mixtures with air of hydrogen, methane, ethane, pentane, etylene, methyl and ethyl alcohol, ethyl ether, benzine, coal gas and petro, the following conclusions were reached: (1) The least igniting current was a linear function of the diameter of the wire. (2) Ignition was for a given size of about 10 cm. Hg, where it suddenly failed. Above atmospheric pressure it rose slightly. (3) A platinum wire 0.02 cm. diameter ignited hydrogen (30 per cent) at 5.45 amperes at atmospheric pressure, and at 6 amperes at 100 lb. per square inch. (4) Gaseous combination, which proceeded automatically to explosion, began, in the case of platinum wires, with the wire at about 200 deg. Cent., well below red heat. (5) With an explosion vessel of 50 c.c. volume it was practically impossible to ignite methane by hot wires. Platinum wires glowed white hot and melted, but did not ignite the gas, which, on being tested afterwards with a spark discharge, immediately exploded. (6) Electric and magnetic fields had no direct influence on hot-wire ignition. (7) The temperature of platinum wires glowing brightly by surface combustion was, when measured, by its change of electrical resistance, much lower than the apparent optical temperature. (8) Ignition was traced to an action occurring, if not within the surface layer of the metal itself, so close to it that the ordinary gas laws did not come into action. It was inferred that the mechanism of hot-wire ignition was an attack upon oxygen either within the wire or by positive ions of combustible gas ejected from it.

Porosity and Volume Changes of Fire-Bricks

In Technological Paper No. 159 of the United States Bureau of Standards, George A. Loomis deals with the permanent changes in porosity and volume of clay firebricks when reburned to temperatures at or above those to which they were originally fired. The following abstract is from the *Technical Review:*

"The bricks were measured for a series of temperatures to determine what relation if any might exist between these changes and the deformation of the same bricks under load at furnace temperatures. The possibility of such a relation is suggested by the fact that contraction of clay on heating and decrease in porosity are, to a certain extent, indications of the amount of softening of the mass due to the action of fluxes present, and hence indicative of decreased resistance to deformation under pressure or decreased viscosity.

"The results of tests on a large number of clay firebricks from various parts of the country show that bricks which withstand a load test of 40 lbs. per sq. in. at 1350 deg. C. without marked deformation show no marked changes in porosity or volume up to 1425 deg. C. Bricks which do not withstand the test generally show appreciable contraction or expansion, accompanied by considerable decrease in porosity. Bricks which showed overburning and the development of vesicular structure below 1425 deg. C. by marked expansion or increase in porosity, invariably failed under load. In general, bricks which show a decrease in porosity exceeding 5 per cent or a volume change exceedingg 3 per cent (amounting to approximately 1 per cent in linear dimensions), when refired to 1400 deg. C. fail to pass the load test.

No Accurate Estimates Can Be Made on Useful Life of Public Utility Property Except as to Minor Elements

L. R. Nash Declares Nearly All Important Elements Are Abandoned While Still in Serviceable Condition

It is a universally recognized fact that most of the physical property employed in public utility service gradually wears out or ceases to have efficient usefulness because of obsolescence, inadequacy, or other functional causes. There has been much speculation among engineers and accountants as to whether the value or usefulness of public utility elements decreased at a uniform rate, in accordance with a sinking fund curve, or in a manner which precludes mathematical expression. So far as wear and decay are concerned, the rate of deterioration approaches uniformity, declares L. R. Nash in an article in *Stone & Webster Journal* for June. It is, however, difficult for an engineering mind to attach any similar uniformity to the loss in usefulness arising from functional causes. A utility element may render wholly unimpaired service for many years when suddenly a new type of element, or one of greater capacity may be required for the future, whereupon the service value of the old unit drops abruptly to a salvage amount.

It is the experience of those well acquainted with public utility history that comparatively few important property elements wear out in service. Nearly all such elements are abandoned while still in serviceable condition because of insufficient capacity, unsuitability to changing public needs, inefficiency as compared with more modern types of equipment, and other similar factors having no direct relation to the age of the superseded elements.

Impossible to Foretell Date of Retirement

It is sometimes possible to predict with some assurance the time when a particular piece of property will become too small for further service or will fail to satisfy the public demand, but other factors which lead to premature retirement cannot ordinarily be foretold within any useful range of accuracy. In many cases the uncertain factors are more apt to be controlling than the others. It may therefore be stated, without fear of contradiction based upon past experience, that no accurate estimates can be made of the useful life of public utility property with the exception of minor elements recurrently replaced because of wear or decay. Such elements are commonly renewed and charged to operating expense, and need have no part in this discussion.

Up to this point the word "depreciation" has not been used herein largely for the reason that it is a very much misused and misunderstood word. Furthermore, when properly used to express the lessening in value or usefulnes of a piece of property, it is not as appropriately used in this discussion as the word "replacement" for the reason that accounting should deal as far as possible with definite tangible things. Depreciation, as already pointed out, has no definite measure in the utility field based upon actual experience. A piece of property, such as a street car which is ten years old, may be said to have depreciated 50 per cent because it has lived one-half of the conventional estimated twenty-year useful life of street cars generally. It may however happen, as is happening to-day, that such cars are retired from service and replaced by cars of the one-man safety type. In the absence of some such factors such a car might not only continue another ten years in service but might even undergo, from time to time, such extensive repairs that its life might be prolonged almost indefinitely, assuming that its type continued to be serviceable.

It follows that any system of accounting which attempts to set aside periodically a mathematically determined sum of money, intended to equal the cost of a certain element at the time of its retirement, is almost certain to misrepresent the facts of the case and to produce a sum inadequate or excessive, probably widely so. It may sometimes be possible to detect errors in estimates of useful life involved in accounting provisions of this kind and to make corrections therefor within the remaining re-estimated useful life of the elements concerned, but such possibilities do not alter the fact that all such accounting procedure reflects not facts but guesses.

The only time when the facts with reference to depreciation are definitely known is when the depreciation is complete; in other words, when retirement of the depreciated property is necessary. At that time there should be available a sufficient reserve to write off the element from the utility's property account. In the case of a utility as a whole, the replacement of retired elements is a recurrent obligation and it becomes the duty of the utility, both to its investors and to the public, to see that its reserves are always adequate to take care of all such actual replacements. Beyond this a replacement reserve has no practical value.

If a utility undertakes to provide for so-called theoretical depreciation, as required by some prescribed accounting systems, by setting aside monthly an amount estimated to accumulate for each property element or group of similar elements the entire cost by the time retirement occurs, there will, in fact, be accumulated a reserve which will never be wholly used for its intended purpose. Nearly all public utility properties are constantly growing to keep pace with the development of the communities which they serve. Under ordinary conditions the unused portion of a theoretically accumulated replacement reserve might amount to as much as 50 per cent of the entire investment in the property. This unused surplus might be permanently invested or otherwise diverted from its intended purpose without interfering with necessary withdrawals for actual replacement requirements. All this excess reserve is contributed by patrons of the utility in excess of the current costs

of service, thereby requiring rates higher than would otherwise be necessary. It is true that there may be some return from the investment of the replacement funds, but this return may be substantially less than the patrons could obtain from investments of their own selection.

Percentage Actually Expended

For practical purposes, as already stated, the reserves for replacements necessary to meet any actual requirements are very much less than the theoretical reserves, and any greater sum serves no useful purpose other than to reduce the amount of financing otherwise necessary for improvements and extensions.

It is possible to obtain some approximate idea of the size of useful reserves by a study of specific cases. An examination of appraisals made on numerous public utilities shows that the theoretical accrued depreciation rarely exceeds 20 per cent. On a property without growth this percentage would be much higher, but such a condition in the public utility field is rare. It is inconceivable that any ordinary public utility could spend for replacements in any one year an amount approaching the total accrued depreciation. Some of the elements are practically new and only a comparatively few are close to the end of their usefulness. It would hardly be possible for a mature utility of the ordinary type to spend in any one year as much as 10 per cent of the total investment, or one-half of its total accrued depreciation. This being the case, any reserve in excess of 10 per cent of the total investment would be superfluous and, if the utility by suitable accruals maintained a reserve of the order named, its practical obligations to both investors and the public would be met.

Assuming that such a reserve is suitable, the method of its accumulation is a matter of practical importance in the standardization of accounting systems. Such standardization is now under consideration by various regulatory commissions, and greater uniformity in accounting methods of central stations, gas companies, and other public utilities, approaching that now in effect for electric railways, is much to be desired.

If a rigid system were adopted under which the replacement reserve was always kept at a certain percentage of the investment, the monthly appropriations to the reserve would be approximately equal to the actual charges against the reserve so that the reserve would not accomplish the desirable purpose of avoiding extreme fluctuations in replacement appropriations.

Two schools of thought exist with reference to replacement accounting. One asserts that the appropriations for replacements should be definitely fixed upon the basis of the cost and useful life of property elements and distributed with unvarying uniformity regardless of business fluctuations and variations in the balance available for interest and dividends. The other school contends that the requirements for depreciation are not definitely or even approximately determinable in advance so that inflexible appropriations for ultimate replacements are an unwarranted refinement, at least where the total funds available from the operation of the property are variable, as is usually the case.

Where the Shoe Pinches

Certain disbursements from utility revenues are necessary for continued operation free of receiverships. They include operating expenses, taxes, and interest upon indebtedness. It is sometimes claimed that return upon the balance of capitalization represented by stock issues is of such minor importance that the stockholder should be satisfied with whatever balance may remain after operating expenses, taxes, interest and full provision for depreciation have been deducted. Here lies the real difference between the two schools above referred to: the one contending for fixed replacement provisions and flexible returns to investors; the other urging fixed returns to investors and flexible replacement provisions. Proponents of the first school fail to recognize that the return sought by investors is in effect a wage. Capital is the product of past labor. Many investors depend upon their income for living expenses, and any curtailment of this income is as serious to them as a reduction in wages or the loss of his job is to a laborer. An investor seeking a profitable use for his money will, among other factors, consider the probability of a regular return, as well as the safety of his principal, and, other things being equal, will select the investment offering the greatest assurance of stability. This is just as logical a procedure as if a laboring man, having two jobs offered him, selected one at a fixed daily wage in preference to another at a possibly higher wage, but conditioning the amount of the wage upon the ability of the company to earn it after making all other possible provisions for the protection of the business and its investment.

If capital is entitled to stability of return consistent with definite requirements of the business, and the requiremnts for replacement reserves are far from definite, as already shown, it follows that the method of accumulating replacement reserves should have such flexibility as will permit stability rof eturn to the investor consistent always with ultimate adequacy of replacement funds. The stability of return thereby provided would definitely tend to reduce the cost of money, would permit financing in times of depression and emergencies when otherwise it would be impossible, and thus tend to develop the utility service and decrease its cost.

The desired flexibility in replacement appropriations might be secured by an accounting program along substantially the following lines:

Replacement Reserve Varying With Prosperity of Business

The accumulated replacement reserve, instead of being a fixed percentage of the investment, might with propriety, because of essential indefiniteness, be set up with maximum and minimum limits from 30 to 50 per cent above and below the normal, respectively. The reserve should always be kept within these two limits. In times of prosperity the upper limit should be approached through liberal appropriations, and in times of business depressions, the appropriations could safely be curtailed until the lower limit was approached. Such flexibility in replacement appropriations would tend to stabilize returns to investors and would, as already stated, insure an accumulation of replacement funds sufficient for all practical purposes.

The specific accounting methods under which accruals to the replacement reserve would vary with the prosperity of the business but at all times keep the reserve within suitable limits need not here be set forth,

(*Continued on page* 50.)

Are You an Amateur?

In Business It Is the Same As in Sports—Learn by Watching the Other Fellow

By FRANK FARRINGTON

Are you an amateur business man?

You know that in the field of sports a professional is one who takes money for his services, and who must, therefore, be qualified to make good. A man who plays baseball for the fun of playing may be responsible to no one for the game he puts up, but when it comes to taking pay for playing he has to deliver the goods; he must play a game worth the money.

You ask money for what you do in the business game in which you are engaged. You expect to be paid as a professional.

The question is, are you running the business in an amateur way while expecting to be paid on a professional basis? There are all grades of amateurs, but a large percentage of them are beginners and many of them are bunglers. They go along, doing their own way, playing the game any way it happens, without sufficient regard for the right way to find out just what it is.

It is one of the faults of many amateurs that they do not follow the best accepted form or methods. They keep right on doing a thing the way they first taught themselves to do it, without regard to whether that way is efficient and will in the end produce the best results.

You have seen amateur ballplayers who batted cross-handed. They began that way and they refuse to change. They try the other way once or twice with poor results, and decide that for them the ungainly, ineffective cross-handed way is best. Of course, having always batted that way, they do better than they will do for a little time when first changing to the right way, but they never get very far with the wrong way.

Changing May Mean a Temporary Slump

Changing from the habitual wrong way to the proper way in any game may mean a temporary slump, but it means picking up very soon and becoming in a little while much better than it would ever be possible to become by the wrong method.

In business it is the same as in sports. You may get along doing business in bungling, amateurish ways, without regard for the right method. If you are satisfied with just making a living and holding your own, the amateur way may be good enough for you. But ways that are just good enough are never good enough for an ambitious man who wants to get to the top.

Form is a great thing in sports. Coaches and athletic directors make a great point of form; that is, of doing each thing in what is accepted as the best way. It is always worth while in games to sacrifice immediate victories in the beginning in order to develop that form which will result in ultimate success and in greater victories.

Your business is of more importance than any game you play, or use to play. Are you taking less pains to be right in business than you once took to be right in tennis form, or than you now take to be right in golf form? Have sports meant more to you than business?

When you were learning tennis you looked to the best authorities to help you get started right, and you were always studying the play of the cracks to see what they did that you could learn to do.

Are you doing that much in business? Are you watching the best men you can learn about in your line?

Pegging Along with the Old Outfit

If you learn only as fast as you can dig it out by experience, you will learn just as you would have learned tennis or golf or pinochle, by playing according to your own ideas but paying no attention to how the other fellows play. Every other man in your line of business has some ideas about methods that are different from yours; has picked up some ideas that you would never run across in your own experience. Are you going to be watching such men and accepting their improved methods without having to work them all out for yourself?

When a fellow dealer in another town has demonstrated that certain equipment for a store in your line is better than what you are using, will you profit by what he has learned and install such equipment, or will you peg along with the old outfit, thinking it good enough?

When another merchant has demonstrated that certain collection methods are highly successful, will you try out his plan, or will you stick to the old, unsatisfactory way you have always done it?

If you were playing a game and your opponent had a successful method that won for him repeatedly, wouldn't you consider trying that same method yourself so soon as you could get a chance to practise it?

The professional player gathers up all the best approved methods and accepts them and uses them without waiting to try out a lot of

discarded methods first. He knows that certain methods have been shown ineffective by thorough trial on the part of others. He wastes none of his time on them. Why should a merchant insist upon following discredited methods and plans until they have lost him business and cost him money, when he has seen better men in his own line adopt better, improved methods?

You have the privilege of studying the methods of other men in your own line of business, and you can apply to your business many of the methods of men in totally different lines. You are not operating a cigar store, but that does not prevent you adopting any good advertising or display stunt the cigar dealer has tried out—provided any variation of it will fit your own line.

Every successful business getting plan used by any merchant in any line has its lesson for you in your field.

But you should not stop with learning from the other merchants you see around you. You should study the methods of those successful men scattered far and wide as their successful methods are described in your trade journals. Watch your business papers.

I don't know that you are one of the subscribers who rarely unwrap their trade journal, who let the copies accumulate in a pile, thinking they will read them some day, while "some day" never comes. I don't know that you pay your money for a subscription and then never try to get any of the money back through reading the paper. I do know, though, that there are men of that sort. Either they are not interested in their work sufficiently to make them want to find out how to do it better, or they are so conceited as to think that no one can teach them any better methods than they are already practising.

People Want Competence

These business men who do not seem to want to learn better methods, who are satisfied to go right on doing things the way they have always done them, are content to remain bungling amateurs, although they are asking the public to pay them for professional service.

When you employ a dentist, do you feel that you will be satisfied with the services of an amateur? Would you have your eyes fitted by some man who knew only as much about optometrics as he may have picked up by practising on willing subjects?

You want a dentist who has learned the very best ways of doing his work, who adopts the scientific methods advised by experts in his work. You want to get your glasses from a man who has had training in the work and who is up to date on his methods and equipment. And you want a dentist who does not stop learning when he has graduated from dental college, but who keeps right on studying, who keeps in touch with scientific discoveries in dentistry; you want an optician who improves constantly through reading the optical journals and learning about modern methods.

The man who learns a little about a certain kind of business and then opens a store of his own and tries to make it successful on the basis of what he learned before he started his own store, cannot hope to get past the amateur stage. A man may become a professional, technically, because he takes money for what he does, but no man can hold his own in the professional class with no other qualification than that for getting into it. In sports or in business a man acquires no standing on a basis of what he knew when he started in. He has to keep improving or he drops behind and finds himself an "Also ran," a "Tail-ender," a "Dub." People may not give much thought to the unsuccessful amateur, but to fail when posing as a professional is fatal.

One of the first things a sportsman takes up when he gets really interested in a game is the rule book. He gets out the rule book and finds out right away ho wthe game ought to be played, what things he must do whether he wants to do them or not. There is nothing optional about rules You play according to the rules or you don't play.

In business a man ought to possess himself of such books as tell him how his business should be operated. There are certain things a man must do in order to make money in retail business.

He must advertise in order to get trade. He must give his customers suitable treatment in order to keep them satisfied and to hold their trade He must know how much stock he is carrying, how much his sales are, how much his expenses, how much his gross and his net profits. He must know the figures of his business and be sure of them.

Know the Rules

If you are going to know the rules of your business, you must study them and keep familiar with them, and if you do not play them according to the rules, you may be sure you will not remain in the game. The umpire or the referee will put you out. It may be the banker or it may be a heavy creditor or the sheriff who will act in that capacity, but unless you make money you cannot continue.

Learn the rules of the game and follow them. Don't try to evade them, for you will get caught in the end. Get the rules thoroughly implanted in your mind, so you will not have to stop and think them out each time. Then develop your ability through watching what better men do and through trying constantly to better your knowledge of the most effective ways.

A man may perhaps be able to afford to remain an amateur in sports because the financial side of the question may have no bearing on the matter, but when you get into business, then your income depends upon your developing professional ability to a degree that will match the money return you expect. Lay aside amateurish methods and learn the best professional way of doing everything that has a bearing on your success.

Selling Customers to Sell Themselves

By C. E. Shaffner

Selling from the point of view of the prospective customer almost invariably brings successful results, although the different elements that go to make up such a procedure are in the main discovered only after careful analysis and not accidentally as is quite generally supposed. This is by no means a new statement of facts, but its particular application to the merchandising of gas and gas appliances really singles out these principles for the development of future considerations.

In a larger sense these elements which constitute the viewpoint of the customer may be defined in a general way. For instance, one of these

essentials may be spoken of as the atmosphere, but unless it suggests at the same time a concrete connection there is very little possibility of establishing the point of contact which results in sales. In illustration of this point the writer has in mind the methods followed by the manager of a gas company in a small Pennsylvania city who was tremendously successful in selling appliances of all kinds and yet who never seemed pushed to get these returns. In fact, it was a matter of general conversation around the city that he always seemed to find time for participation in civic and social affairs, but only an observing few ever gave him credit for evolving methods which really appealed to the customer.

Reducing the New and Unusual to the Commonplace

For one thing he established the gas office as a clearing house for domestic problems having to do in particular with cooking and baking. Consequently it became quite an ordinary occurrence for the head of a local family to partake of a new dish the recipe for which had come directly or indirectly through some neighbor from this clearing house. Quite often demonstrations of the culinary art were presented by capable ladies, but always with the implication that similar results might be achieved in any household and that they were by no means dependent upon the skill and knowledge of an expert. In short he succeeded in reducing the new and unusual to the commonplace, but only in point of execution without taking away any of the zest and delight which any woman associates with a tasty dish or a new wrinkle in cookery.

Avoiding Monotony

In selling a gas range or any other appliance he faced tremendous odds in the shape of a deep seated conviction that the coal range was the last word in providing heat for almost any household task coupled with the fact that coal was mined extensively all around the city and, therefore, was easily available at an extremely low price for all purposes. But time and again the writer has witnessed the negotiation of successful sales simply because the methods employed found an appeal far deeper than any considerations as to quality or any odious comparisons. Little time was wasted on any technical discussions. Gas appliances were sold entirely in terms of their possibilities for performance in the home.

There are a number who will say that remarkable success of this kind is largely the result of special adaptation for a particular line of selling, but by the same token it is evident that excellent results in any field are obtained only because the situation is correctly analyzed so that the proper message may be delivered in an appropriate medium. The dealer in gas appliances who thrusts into his display window a gas stove and perhaps a gas heater as a perpetual display unconsciously builds up for his establishment an atmosphere of deadly monotony which cannot fail to eventually "get on the nerves" of a number of his customers. The woman on a shopping tour especially wants to forget for a while the demands of household work some of which becomes drudgery, and this is riveted upon her attention in a number of cases by seeing one of the old familiar appliances which she sees day in and day out.

Exponents of the persistent appeal will deny that any merchandise should not constantly be brought to the attention of prospects, but the fact undoubtedly remains that a new method of presentation, even though it may only imply the need for a gas appliance will in the long run secure a more favorable entree and especially from women customers.

What the prospective customer has in mind will always turn the trick if it is discovered and met fairly. The point of view of the other side may always prove tiresome enough to upset the sale if the ideas of the person on the outside of the counter are not taken into consideration at every turn.

Gas Employees Attend New England Meeting

The managers and their assistants of concerns in New England controlled by the Stone & Webster Company, held a meeting of three days at New London, Conn. The sixty present discussed problems of public utilities such as gas and electricity particularly in regard to the companies in the Stone & Webster system. Representatives of companies in Haverhill, Lowell, Fall River, Abbington, Rockland and Boston, Woonsucket and Pawtucket, R. I., and New London, Conn., were present. H. T. Edgar, Boston, and N. C. Sperry, Boston, were the principal speakers.

Petersen Tells How to Sell All Gas Kitchens

By S. G. Addison

During a recent gas convention Peterson and the sales manager of another gas company had finished eating in the hotel grill room. As they settled back comfortably in their chairs to enjoy their smokes, the other man said to Peterson, "I've been trying to discover the best type of salesman to sell all gas kitchens. I don't think that I've been so successful along these lines as I should have been. Our sales have been very satisfactory, but I don't think we have driven enough coal ranges out of the kitchens."

This happens to be a subject upon which Peterson is considerable of a crank. He has been very successful in selling all gas kitchens and has several good men doing this sort of work. In fact it was for this very reason that the other man had joined him this evening and why he had just made the remark that he had. He wanted to draw Peterson out and there seemed no better time than just after a good meal when the thing could be talked over through the smoke of their cigarettes.

"I don't know," began Peterson, looking at the end of his cigarette as he blew a cloud of smoke into the air, "what type of salesman is the best for this kind of work, but I do know the type who have been able to get the best results for us." He then took another puff and the other man waited in silence for what he felt sure was coming.

"You have probably heard of our man Brown," he continued. "He has been very successful in selling gas kitchens and besides he has the closest sort of co-operation with the plumbers and furnace men. I don't know whether you have ever met Brown or not." The other man replied that he did not.

"When you do meet him," warned Peterson, "don't expect to see a man that much of our modern sales literature leads us to expect a salesman especially a good salesman ought to look like. Brown hasn't any of that magnetic personality, eagle eye and persuasive manner that the story books tell us about. He has a little less than the ordinary amount of personality, he has a frank but not a keen eye and he isn't a good talker by any means. He hasn't enough of the appearance of a salesman about him so that people ever realize that he is trying to sell them goods. They

just think he is telling them all about the goods and that they are to form their own judgment. He gives the information in such a frank and straightforward manner that they always take his word for it. He breaks another rule of salesmanship. He doesn't press for an order. He gives his customers plenty of time to make up their minds and none of his orders are ever cancelled or changed. We know that each order he takes wil result in perfect satisfaction to the consumer.

"Brown goes about his work considerably different from most gas salesmen I have ever met. In the first place he knows heating and ventilation from the ground up. He worked for some time for a heating and ventilating engineer. I believe it is service along this line that he renders to plumbers that makes them all help him rather than knock him.

"When Brown goes into a house he first asks to see the kitchen which he looks over very carefully and if there is no heat outside of the range in the kitchen he asks to see the heating plant in the cellar. Now it happens as you know that very few houses have efficiently installed heating plants. Usually there is some room in the house that is not well heated because of a defect in the heating plant installation. Brown is always able to detect these faults. Often they are faults that can easily be remedied. He goes over the system carefully and shows what changes can be made to save coal. He shows them how they can heat the kitchen as well as the other rooms in the house and burn no more coal.

"Very often people keep their old coal ranges in the kitchen for no other reason than that they fear they won't be able to heat the house from the furnace alone. When Brown has finished looking over the plant and explaining the proper way to heat a house he has made it clear to them that they not only can heat the whole house with the heating plant they now have, but they can do it and burn less coal. He never criticises. He just explains. He goes into detail and makes every point perfectly plain. When he suggests covering the pipes he gives the experiences of large factories and the large sums of money they have saved. He figures the whole thing out for them so that there is no question about it. As a matter of fact a great many people have heard of the coal that has been saved by following his suggestions and are, therfore, glad to get them. With coal going up all the time people are becoming more than ever anxious to make it go as far as it will.

"You see he settles the question of heating the kitchen and getting rid of the coal range before he begins on the gas range. When he gets to the kitchen he shows where to place the gas range in order to save every possible step and reduce the housework there to a minimum. He actually shows them in detail and not in a very general way. Sometimes there is more than one spot where the range could be located. He points out the advantages of each spot and after the customer has decided just the spot in which she would like it placed he measures the area available and shows only the ranges that will fit into that spot. The result is that there are only a few to choose from."

"What does he do with the old coal range?"

"I was coming to that," said Peterson. "Sometimes he merely moves it down to the cellar to satisfy the desire of certain people to have something to fall back upon in the case of an emergency. In fact I think that considerable of his success has depended upon his suggesting that they keep their old coal ranges but that they place them in the basement. Having the coal range still on the premises makes the consumer feel safer and by the time that range has rusted out she has outgrown the desire for an emergency range. When it is down cellar she never replaces it and rarely, if ever, uses it, while if it was left in the kitchen she would continue to use both coal and gas. Besides, with the range down cellar we don't have to worry about disposing of it. ature takes care of that."

"But how about payment for all of this," questioned the other man. "In some cases it is going to cost a good deal, especially the changes in the heating system."

"We," replied Peterson, "finance these changes. It isn't hard to show the consumers that the changes that we suggest will result in a great enough saving of coal and a sufficient increase in comfort to pay all the interest on the money invested and eventually to wipe out the investment. Brown always figures this out for them. He says that people want these things and all they are looking for is a good enough excuse to satisfy their conscience for spending the money. All he does is to supply this good excuse.

"When the whole thing is figured up he shows them the total and the amount that they will have to pay with their gas bills. We give them two years in which to pay it so that each monthly payment is not large and the way Brown explains, all the advantages it looks well worth the cost to these people. You see Brown doesn't use any selling arguments at all, he just renders real worth-while engineering service. He shows people how to reduce the amount of work and the cost of fuel. When he gets through they simply buy what he recommends."

"That is all very well in the case of people who own their own houses, but everyone in your city don't own their own houses, do they? How do you handle the landlords?"

"That is a more difficult job. We go about it in a little different way. We are trying to teach the landlord the advisability of building his houses with all gas kitchens. We point out to him the added cost to him in depreciation of the house when tenant installs and removes arnges and water heaters, perhaps drilling new holes in the floor in order to place the range in some new place. We also show him that the increased rent that he can always secure by having his kitchens complete and thoroughly up-to-date more than pays the interest on the improvements. In addition we keep a full list of the houses for rent that are equipped with all gas kitchens and give the landlord every assistance in securing just the sort of tenants that he desires. Even in these days when it's easy to rent houses they appreciate this service. The amount of profit on the house is determined to a very considerable extent by the damage done to it by the tenant. We are able to render the landlord really worth while service in selecting tenants, and often we are able to render equally as good service to our consumers in selecting landlords. You see the whole thing simmers down to a matter of giving real service rather than of using persuasion. This whole scheme has been worked out by Brown, we are backing him up and it's paying us to do so. Besides, he's working harder because it is his own scheme and he wants to see it succeed."

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As the Journal Views It

Gas Lighting and Gas Financing

There is a considerable group of investors who, if figures, regardless of appearances, showed a satisfactory and reasonably certain return on the investment would buy to their limit of gas company securities.

But there is another group of investors and their number is legion, which is very much influenced by impression formed by the senses rather than a study of figures.

We have always been wont to view the prevailing impression that the gas business is quickly passing into oblivion as an affront to our pride rather than a threat to our financial welfare.

But it has been and is a fact that the list of "prospects" for gas company securities is vastly curtailed by that selfsame impression that as a business we are a relic of the past, lacking even the necessary push to give ourselves the final propulsion over into oblivion.

Born of the time when gas lamps began to disappear from private homes and public streets, the impression that the industry was going back gained momentum, did not give us much worry a few years ago.

We realized it was traceable to the "out of sight out of mind" school of logic. The public failing to see concrete evidences of the industry's vitality all about it superficially took it for granted that that vitality was ebbing.

But we were full of ambition then. We were going to fill the country's industrial plants with gas furnaces, the country's dwelling places with water heaters, captivating fireplace heaters, incinerators, etc. There would be plenty of appliances about to convince this

superficial public that gas and gas companies were very much alive and about.

But all this pent-up steam has apparently spent itself through the safety valve.

At present we are giving about as good an imitation of being dead and permanently interred as is possible to give without actually going out and announcing it. It would indeed be a mercy if we had a few million more gas lamps about to-day to at least give an impression of vitality.

An erroneous impression that is belittling and hurts but our vanity is merely annoying. When it begins to threaten in part our financial well-being it becomes worthy of correction.

Helpers in the Domestic Problem

A few years ago some condemned the combination gas-electric company. Few there were in the gas field who declared them a good plan.

The underlying basis for the gas man's prejudice doubtless was lack of confidence in his own product. Fearing that were the gas plant to fall in the electric company's hands there would be a tendency to favor electricity against gas, and with partiality behind it electricity might go ahead while gas supply went back.

It is not for lack of combination companies that gas is predominant in cooking. It is so because of superior merit. No sane management of a gas-electric company would even think of submerging the most meritorious agency in favor of the lesser.

To-day gas and electric companies have a vast field in common. That is domestic labor saving devices.

To develop it to the best interests of either or both of them there should be the closest co-operation between the gas company and the electric company or actual consolidation, the former infinitely the preferable.

The electric dishwasher and electric clotheswasher make as promising a field for the use of gas as they do of electricity. Electricity turns the wheels, but water must be heated. If the aim of the gas man is to increase the use of gas he would almost as certainly be fulfilling his mission by selling an electric dishwasher as he would be by selling a gas range.

The domestic ironing machine is more of a gas appliance than it is electric. It is a sorry commentary on the gas man's alertness that to-day its sales are being made almost entirely by what are termed electric people.

Domestic labor saving machines are being sold to-day as fast as manufacturers can turn them out. Coupled with the servant question they sell themselves.

They are the big field of sales opportunity of the present time. The gas merchandiser should have no obstacle in his way to getting his share of it.

Prospects for Improvements in Small-Town Plants

Great though their need of rate relief may be the situation of the big-city companies is in no way so acute as the need for relief of the typical small-town company. And in no situations, even in the days of low costs, have the established rates been higher.

Immediately, if they are to survive, the average run of small-town companies must have relief in rates. Then, with equal promptitude, if they are to survive, the average run of small-town companies must set about to bring rates down again.

Established rates are at the prohibitive point for the use of gas in its broader aspects. Further increases will reduce its sales field to the barest of the elementary uses. And no gas company to-day can survive and prosper on a cooking load alone.

With the large companies the field of development in effecting economies is complex for the reason that it has too assiduously and continuously been combed over. In the average small company the problem is to a very large degree simplicity in itself.

Too niggardly compensation and a too niggardly public attitude has held back the small-town company from keeping up with the times in the matter of plant.

The big opportunity in the way of economies in the small-town plant lies in big expenditures to bring it up to date in equipment in the shortest possible time.

The increased rates that will make the finding of ways to economy a matter of actual survival, will provide the attraction for the capital necessary for the improvements and new construction.

Modernized gas practice is an actual necessity to the small-town company. Extensive remodeling and reconstruction is the prime means of attaining such aim.

No Accurate Estimate Can Be Made on Useful Life of Public Utility Property Except as to Minor Elements

(*Continued from page 44.*)

and it would not be a simple matter to lay down wholly definite rules as a substitute for the judgment heretofore commonly exercised in such matters. The suggested general basis of accounting instructions is that, after a utility has determined the average amount necessary to maintain in the long run a suitable reserve of the order required, this average rate of accrual should not be curtailed unless the balance available for returns to investors, after providing for such average accrual, shows a tendency to decrease, in which event the accrual might be curtailed to an extent consistent with the decrease in net revenues, but always within the limits necessary to maintain the minimum reserve. With increasing revenues there should be a corresponding increase in accrual to build up the reserve toward its maximum limit.

It is quite obvious that such a program of replacement accruals differs fundamentally from that pre-

scribed by the Interstate Commerce Commission in its accounting system for interstate electric carriers. The interstate system has been in effect a comparatively short time during which all carriers have suffered unprecedented reverses until they have reached a point where their credit is most seriously impaired if not destroyed. The number of receiverships has increased beyond any previous records whereas, on the other hand, many industrial enterprises, free from the restrictions surrounding public utilities, have prospered as never before. The accounting requirements of the Interstate Commerce Commission and similar requirements which have been put into effect by State commissions have been a contributing, although by no means a dominant, factor in the present financial condition of public utilities. It is submitted that, in the absence of rigid replacement charges, the utilities so regulated would have been in an appreciably better financial condition and could have functioned more effectively during the war emergencies.

There remains to be considered the question as to whether or not accruals for replacements should be charged to operating expenses, as required by interstate and State classifications, or by appropriations from surplus, as has been the common practice in the past. The former arrangement has the advantage of reflecting more fully in operating expense the cost of production and upkeep of the property. If, however, flexibility in accruals for replacements is conceded as desirable, there is injected into operating costs an element different in character from those ordinarily so charged, resulting in fluctuations in operating ratios which would be confusing to operating officials who have been in the habit of closely following such ratios and gauging the efficiencies of operation thereby. Operating ratios could, of course, be determined exclusive of replacement accruals for the purposes of routine operating studies.

Flexible Replacement as Related to Rate Regulation

The general program of flexible replacement accruals within the defined limits of total accumulated reserve would have a very substantial advantage in connection with rate regulation. Regulatory commissions universally concede that a reasonable return upon the value of public utility property is a necessary part of the cost of service, and it will not be disputed that the greater the regularity in this return the lower it may be. If, therefore, this return were made practically constant, as are current operating expenses and taxes, the one remaining element involving flexibility would be the replacement accruals and their accumulation. The accumulated replacement reserve would accordingly be an index of the adequacy of revenues and might properly be used by the commissions as a guide to the need of increases in rates or the possibilities of decreases. In fact, such an arrangement would approach the automatic regulation of fares provided for in the numerous and increasingly popular service-at-cost franchises under which electric railways are operating. There is no reason why regulatory commissions might not substitute a practically automatic program of regulation under the method proposed in place of the present more cumbersome and often long drawn out rate proceedings which frequently fail to furnish relief until long after it is needed. It is believed that the adoption of some such program of regulation, involving flexible replacement accruals, would immediately improve the credit of public utilities subject thereto and permit them to improve and extend their service and reduce their charges.

German Sulphate of Ammonia Association

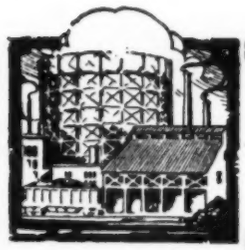
The report of the German Sulphate of Ammonia Sales Association of Bochum, recently published, states (says the *Iron and Coal Trades Review*) that the year 1919 did not bring about the desired relief in economic life. Notwithstanding the extensive new installations established during the war for the production of synthetic nitrogen, the output of nitrogen was less than expected, as it was impossible to utilize to the full extent the capacity of the plants owing to the scarcity of coal and other raw materials and the reduced labor efficiency. As a consequence, the output was constantly considerably less than the requirements. Apart from the uninterrupted rise in wages and the prices of raw materials, the difficulties experienced in obtaining the latter were such that it was quite impossible to erect new plants; while the improvement and upkeep of existing installations could only be accomplished with difficulty. In addition, the after-effects of the events in November, 1918, were rendered specially noticeable in the working conditions of the coking plants belonging to the members of the association.

During October, 1918, the production of the associated works, converted into sulphate of ammonia, amounted to 32,000 tons, while the average monthly output in 1919 was only 18,000 tons. The sale of sulphate of ammonia was carried on by the association under Government regulations until the beginning of August, when it was transferred to the Nitrogen Syndicate of Berlin, to which the association belongs. Despite higher prices, a number of the members of the association incurred a loss, as a substantial portion of the increase had to be paid into an adjustment fund, and working expenses also rose with the advance in prices.

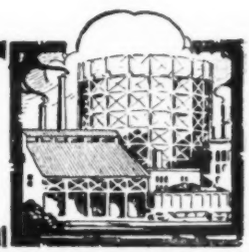
The propaganda work of the association is to cease. An endeavor is, however, being made by large concerns who produce sulphate of ammonia in auxiliary plants to form a company to continue the propaganda within certain limits, so that sulphate of ammonia may retain its position as a fertilizer.

German Ammoniacal Liquor Plentiful

A recent issue of the *Chemical Trade Journal* said: "The German production of nitrogen is increasing, according to the latest reports; but there is difficulty in getting it shifted from the works. A statement issued by the German Ammonia Salts Union, of Bochum, points out that whereas in October, 1918, the union produced about 32,000 tons, the monthly production in 1919 made only about 18,000 tons, and in April last only 7,000 tons. Ammoniacal liquor must have been accumulating in large quantities since October, as the necessary sulphuric acid has not been available for conversion. These quantities of liquor have had to be stored at great cost, with a probable continuance of the trouble, as their manufacture into solid nitrogenous combinations has been impossible for want of the necessary store room, besides coal and lime."



NEWS OF THE GAS INDUSTRY



New Gas Standard Asked by U. G. I. Approved by Council

After two hours' discussion, Council's Committee on Transportation and Public Utilities approved an ordinance to permit the United Gas Improvement Company, Philadelphia, Pa., to substitute the British thermal unit standard for the 22-candle power lighting standard on gas furnished in Philadelphia.

The measure, suspending the candle power requirement clause in the lease of 1897, under which the company operates the city's gas works, is to be effective until Jan. 1, 1921, unless terminated earlier by council.

Between now and the end of this year a commission of experts, provided for in another bill pending, is to investigate the general gas situation and advise the municipality whether the heating standard should be incorporated permanently into the lease. Both measures were sponsored by Councilman James A. Develin, Independent.

Mr. Develin argued a provision should be put in the temporary agreement for the U. G. I. to make some reduction in the price of gas to the consumer, as the company probably will save $400,000 the remainder of this year by effecting a reduction of 8,000,000 gallons in oil consumption. It requires less oil to make gas on a heating standard than on a candlepower basis.

Samuel T. Bodine, president of the company, who furnished the committee with the foregoing figures, opposed that suggestion. He said the financial saving on oil would not be sufficient to meet the operating loss the U. G. I. has experienced the past two years. He also contended the temporary suspension of the candlepower standard is an emergency measure, to insure a sufficient supply of gas next winter under existing oil shortage conditions.

Other members of the committee agreed with Mr. Bodine the question of reducing the price of gas should not be taken up until after the proposed commission of experts, to be appointed by Mayor Moore, goes over the company's books and makes definite recommendations. The present price per 1,000 cu. ft. is $1, of which the company receives 75 cents and the city 25, under terms of the lease.

Another point raised by Mr. Develin was whether householders would have to consume more gas on the B.t.u. standard, to obtain sufficient illumination. Mr. Develin said he thought the average consumer would not notice the difference between the gas furnished now, about 18 candlepower, and the heating gas, which, at a minimum of 530 thermal units per 1,000 ft., would be equivalent to about 14 candlepower.

While the lease calls for 22-candlepower, the U. G. I. head said it had been reduced to 18 some time ago, because the company was physically unable to meet the lease requirements.

City of Omaha Takes Over Gas Plant

Acquisition of the Omaha gas plant by the city of Omaha, Neb., has been completed. Active management was assumed by R. B. Howell of the Metropolitan Water Board July 1.

Any change in gas rates cannot be effective before Aug. 1. It is predicted that rates will be increased, possibly to $1.35. The present rate is $1.15.

Commissioner W. G. Ure and Corporation Counsel W. C. Lambert, in New York to complete the transaction, turned over $5,000,000 in municipal bonds to the United Gas Institute, parent company of the Omaha Gas Company, and the Farmers' Loan & Trust Company, trustee to a mortgage of $2,400,000 now on the plant.

Of the amount paid, $4,628,000 represents the actual cost of the plant and extensions, while the balance is given in payment for supplies on hand.

A. G. A. Appoints Committee to Confer with Oil Interests

In pursuance of a resolution adopted at a recent emergency meeting of gas company executives in New York City, Geo. B. Cortelyou, president of the American Gas Association, has named a committee of nine representative men in the gas industry to confer with representatives of oil producing and refining interests, in an effort to obtain preference in allocation of oil for gas-making purposes.

The committee consists of Philip H. Gadsden, vice-president of the United Gas Improvement Company of Philadelphia, as chairman; Samuel Insull, Peoples Gas Light & Coke Company of Chicago; W. R. Addicks, Consolidated Gas Company of New York; Randal Morgan, the United Gas Improvement Company of Philadelphia; A. M. Barnes, Cambridge Gas Light Company of Cambridge, Mass.; Henry G. Bradlee, Stone & Webster, Boston, Mass.; P. S. Young, Public Service Gas Company of Newark, N. J.; H. C. Abell, American Light & Traction Company, New York, and C. L. Holman, Laclede Gas Light Company of St. Louis, Mo.

This action, according to gas manufacturers, is made necessary because of the unprecedented increase in the use of oil for purposes other than the manufacture of gas. Gas men say there is an appalling shortage of oil which, coupled with the scarcity of coal because of lack of transportation facilities, has greatly imperiled a continued supply of gas and threatens a calamity to some 45,000,000 people who are dependent upon the use of gas for cooking and other vital domestic uses.

The committee of gas men hopes to obtain a favorable understanding with the oil interests and thus make possible the continued production and distribution of gas in quanities to safeguard the general public and meet the requirements of the various

rules, regulations, ordinances and contracts under which gas companies now are operating.

Price of By-Products Sharply Advanced

Export Inquiry for Benzol Good—Intermediate Market Inactive

Crudes were sharply advanced by the makers on the first of the month, this in spite of the fact that most of the makers are unable to do anything for near-by delivery. Rising costs are given as the reasons for these advances. Spot conditions were little affected by this advance for the spot market was bare and available supplies were entirely in the hands of the resellers at the time of the advance. Export inquiry for benzol is good, but supplies are too small to take care of it. Other products suffer in the same way and from the same reasons. The intermediate group is inactive.

The prices of benzol have advanced and are now quoted at 35 cents per gallon for the pure and 33 cents per gallon for the 90 per cent. Makers are doing their best to catch up on their contracts, but so far have been unable to make much progress. It is reported that car tracers are being employed to facilitate shipments, but that little progress is being made.

There has been no change in the quotations of the makers for creosote oil, and they are holding at 40 cents per gallon for the 25 per cent grade and 20 cents per gallon for the 15 per cent grade. Business is as active as the available supplies will permit.

Naphtha was also advanced 5 cents per gallon by the producers during the period and is now quoted at 30 cents per gallon for shipment. The spot market is still largely in the hands of the dealers who are now quoting the new prices of the producers.

The producers advanced the price of pure toluol and now quote 35 cents per gallon for water white goods in tank cars. They are far behind in their deliveries, however, and are unable to make any prompt shipments. The spot market at once advanced with the makers, and at the close small spot lots were offered on spot at 35 cents per gallon and no business at lower than this could be done.

Memphis Gas Co. Would Issue Certificates

The Memphis Gas & Electric Company, Memphis, Tenn., has asked permission to issue additional receivers' certificates for $1,000,000, which they claim are necessary to extend the properties and prevent a breakdown of service. The case is now in the hands of Judge John E. McCall, of the U. S. District Court, who will render his decision after a thorough examination of the briefs prepared by the attorneys for each side of the case.

At present the company has outstanding mortgage bond issues, held in trust by several of the largest banks in the country, amounting to about $11,000,000. The Northern Trust Company of Chicago is trustee for a first mortgage bond isue of $646,000. Another bond issue is held by the Colonial Trust Company of New York City in the sum of $1,250,000. The consolidated refunding mortgage of the Memphis Consolidated Gas & Electric Company, issued Jan. 1, 1903, is held by the Central Trust Company of New York in the amount of $5,728,000. This same trust company also holds the mortgage of the Merchants Power Company, issued July 1, 1907, in the sum of $1,278,000. The general and refunding gold bond mortgage of the Memphis Gas & Electric Company went to the Central Union Trust Company of New York, as trustee, in the sum of $2,263,000.

L. P. Miles, representing the Gas & Electric Company, states that the company will be in a most serious predicament if the $1,000,000 is not allowed to be raised through the issuance of receivers' certificates. He also claimed that the city of Memphis may be forced to remain dark and without the use of elevator service in its office buildings if this fund is not raised, because of the wornout condition of the plant machinery to-day, and that this additional sum is absolutely necessary to save the city from the catastrophe of being unable to cook its three meals a day.

Gas Statistics

Recent statistics show that 1,166 artificial gas companies in the United States are supplying more than 300,000,000,000 cu. ft. of gas of one sort or another to 8,500,000 consumers.

Schenectady Gas Advanced to $1.50

The Schenectady Illuminating Company, Schenectady, N. Y., announced that a new rate for gas in Schenectady and vicinity has been filed with the Public Service Commission, raising the price of gas to the consumer from $1 to $1.50 per 1,000 cu. ft. The new rate will be effective from July 11.

Henry W. Peck, vice-president and general manager of the company, said that filing with the Public Service Commission made the new rate effective at the specified time. The increase affects 19,600 patrons in Schenectady, Scotia, Glenville, Niskayuna and Rotterdam, N. Y.

The rate in Albany is $1.15 and in Troy $1 per 1,000 cu. ft.

In a statement for the company Mr. Peck said:

"The officers and directors of the company, believing that the cost of raw materials would decrease shortly after the war ended, have postponed making any increase in gas rates. As these costs are still rising, however, and as it is now generally agreed that high prices will be maintained for an indefinite period, it has become necessary to increase the rates.

"In ten years the cost of anthracite coal has increased 109 per cent, bituminous coal, 108 per cent; gas oil, 467 per cent; taxes, 241 per cent; labor 175 per cent. In spite of these larger increases it will for the present only be necessary to increase the price of gas fifty per cent, due to the increased efficiency of the plant and the large increase in total gas sold."

Mr. Peck added that the consumption of gas in the territory covered by the company had increased to three times the amount used in 1912, and that the present rate of consumption was about 2,000,000 cu. ft. a day. The increased rate will mean an advance in revenue of $1,000 a day.

Continuing his statement, Mr. Peck said:

"The company has never made large earnings, the greatest amount available for interest and dividends having been eight per cent, while last year it was not over four per cent. This year the revenue, at the present gas rates, would not be sufficient to pay operating expenses and taxes."

Gas Appliances Enjoy Long Season Due to Cold Spring

Sales of the gas ranges thus far this year have been excellent throughout the territory supplied by the Public Service Company of Northern Illinois. The so-called spring season for gas appliances was indeed prolonged by the continued cool weather. This condition was represented most strongly in the demand for space heaters, but ranges as said were wanted after the date when the sale supposedly slackens—but frequently does not.

Good sales of water heaters are anticipated this summer especially in sections of the territory where water heating facilities in many houses are the reverse of modern. The latter fact has been frequently referred to. It is worth many references since it evidences the large field for water heaters still follow. Small low priced water heaters are showing in their sales growing popularity.

Prospects for the enlargement next winter of the company's gas heating service are described as excellent in the sections of the territory to which it is considered most applicable. It is stated there will be no delays in the delivery of gas boilers. Difficulty in obtaining these last year it is thought, retarded development of the service.

City Lowers Gas Rate by New Ordinance

The city council of Des Moines, Iowa, has passed an ordinance setting the price of gas at $1.05 per 1,000 ft. The ordinance is to take effect from July 1, 1920.

The new figure is five cents lower than the present price charged by the Des Moines Gas Company and 35 cents less than the price asked by the gas company in a recent petition to the Federal Court. According to attorneys for the city, the ordinance was passed to put the city on record against the proposed increase in gas rates asked by the company. It is considered a fair price for gas and is the figure which will be fought for by the city in the hearing on the application of the corporation for $1.40 gas.

The ordinance in addition to establishing a price for gas in the city, also restores the quality standard in force before the war. It provides for 22-candlepower gas. This means, according to the British standard of measurement, their consumers will receive approximately 100 more British thermal units in each cubic foot of gas than they are now getting. There are now barely 565 B.t.u. in the gas. Under the 22-candlepower standard it will run from 660 to 670. In other words, its lighting and heating qualities will be vastly improved.

Penalties for overcharging are severe. A fine of $100 or thirty days in jail will face any employee or representative of the gas company who is found to be charging more than the established rate of $1.05. However, the ordinance provides that large consumers of gas may be granted a lower rate, but reserves the right of the city to approve the contract between the company and the consumer.

Commission Will Not Permit Imperial Valley Gas Co. to Be Sold

The State Railroad Commission has refused the application of the Imperial Valley Gas Company, El Centro, Cal., to sell its plant and quit business and the new rate decided on is as follows:

Imperial Valley Gas Company, which serves El Centro, Brawley and Imperial in Imperial county, Cal., will not be permitted to abandon its business as a public utility as applied for by C. E. Paris, receiver of the company. The company has been operated by the receiver since Jan. 6. With present leakage and inadequate production and storage facilities the losses have been large and the future hopeless to change the situation. The company and the receiver both were anxious to give up the business, but the consumers of the three places at a meeting held at El Centro asked the railroad commission not to permit the abandonment of service but to increase the rates to such a point that the company would be able to rehabilitate its property and readjust its finances and put it on the way to profitable operation. The artificial gas supplied is the only fuel obtainable by the consumers and they are willing to pay any rate commensurate with the necessity of the business. Accordingly the railroad commission has denied the request of the company to cease operation. It has also established rates which are as follows:

First 1,000 cu. ft. per meter per month—gross, $3.60; net, $3.50.

Next 4,000 cu. ft. per meter per month—gross, $3.36; net, $3.25.

Next 10,000 cu. ft. per meter per month—net, $3.

Next 15,000 cu. ft. per meter per month—net, $2.50.

All over 30,000 cu. ft. per meter per month—net, $2.

Per 1,000 cu. ft., minimum charge, $1 per meter per month.

Meter connection charge, $2.

In its decision the commission says that after a test of six months in the use of these rates the company will then be in a better position to determine whether it can establish its business with reasonable chance for profit, and in the meantime the income will determine the sufficiency of the rates to provide the rehabilitation of its system by the construction of new mains, storage tanks and improved appliances in the gas making plant.

Large Demand for Gas Fuel in Industries

A notable feature of the industrial gas situation is in the increased demand for the fuel from plants now large users of it. In some plants connected and supplied from the mains of the Public Service Company of Northern Illinois gas is employed in more than two dozen distinct manufacturing processes. In the cases of some of these the number of shop operations carried out with gas fuel is being multiplied and in others there are enlargements of facilities. Concerns not heretofore users of gas fuel whose managers have studied its efficiency in other plants are among those joining in the demand mentioned. In numerous instances gas is wanted to supplant other fuels supposed to alone be suitable for the particular processes of these industries.

Empire Company Brings in Big Gasser

The Empire struck a heavy flow of gas in its new wells Nos. 5 and 6 on the Teter in Greenwood County, Kansas. The gas sand appeared on top of the oil sand in each well at 2,545 ft., and in each the flow is estimated at 9,000,000 ft. The company is running the six-inch casing and is bradenheading off the gas flow.

Great Saving in Installation by Use of Special Mixer Which Dispenses with Air Supply System

The distribution practice whereby high pressure instead of low pressure gas may be supplied to industrial customers is effecting a large saving in the costs of the gas installation now being made in an important factory located in a town in southern Illinois. The method, which was devised by engineers of the Industrial Gas Department of the Public Service Company of Northern Illinois requires the use of a special mixer. This is adjusted to admit the proper combination of air and gas to secure the best combustion and thus maintain the temperature required. A preliminary analysis of the flue gases supplies the data needed as a basis in reaching the setting point of the mixer. The latter then calls for no further attention and thus the services of valve attendants may be dispensed with. One of the most important achievements of the mixer is in its dispensing with auxiliary pipes to convey air for mixing purposes together with the pumps and blowers part of this pipe equipment. Savings in installation costs amounting to 60 per cent can thus be made.

In the gas installation of the plant referred to there will be no air pipes. Gas will be taken into the piping system of the establishment from the company's mains at a pressure of five pounds at the customer's meter and combined with the air quantities needed by means of the special mixer. Among the processes to be carried out at this plant are annealing, japanning and enameling. In all of these gas is extensively used throughout the industrial territory of the company in substitution for oil. High pressure gas is found to be particularly efficient. Indeed that is true of welding, melting and other high temperature operations.

In the plant referred to the installation being new is, as stated, planned for the introduction of the special mixer from the start. Other plants where the device has been put in service carry air pipes and their auxiliary apparatus, having become gas consumers before the mixer was perfected. It, however, has rendered the air pipes superfluous.

A galvanizing kettle in a plant in the western part of the territory is being fitted up for fuel gas to be supplied by the company. It is probably the largest size kettle in use, being 4 ft. wide, 24 ft. long and 3 ft deep. Its capacity is 20 tons of spelter. High pressure gas under single valve control will be burned. This sort of a kettle—or "pot" as it is usually called—is kept in operation day and night continuously except on days when work stops in the plant. But even then the top of the kettle will be fitted with a cover of insulating material and the gas will be kept alight. The reason for this policy is it is found the cost of gas burned while the kettle is not at work is greatly less than the increase in wear and tear of it that results when it is allowed to cool. The customary shop policy is to keep such a kettle actively at work until sufficiently worn to be discarded.

American Petroleum Institute Co-operating with A. G. A.

According to an announcement made by the American Petroleum Institute, that association is co-operating with the American Gas Association with the idea of securing for the latter a modification of present candlepower standards, which are claimed to be unreasonable. Steps have been taken by the gas association to urge upon representatives of the oil producing and refining interests the necessity for priority in allocation of oil for gas making purposes in order that the supply of oil shall be sufficient for all uses. An acute shortage of gas oil is noted by the petroleum institute along the Pacific coast.

The part which the petroleum institute is playing in the present situation is outlined in the following statement:

"The secretary of the institute has sent out to all refiners furnishing gas oil on the Atlantic coast an inquiry to ascertain whether it will be possible for the oil companies furnishing gas oil to continue to take care of their present customers. This inquiry was sent out after a conference with a number of refiners, who felt that the gas oil situation would not be as difficult as anticipated if the refiners would uniformly take care of their present customers. The situation seems to be more acute on the Atlantic coast than in the Middle and Far West. The institute is co-operating with the American Gas Association in every way possible to secure a modification of the present candlepower standards, which are unreasonable from every aspect."

Personal Notes

ALLAN S. GRAHAM has resigned as manager and superintendent of the Sioux Falls Gas Company, Sioux Falls, S. D., to go into the business with the Tri-State Electric Company, wholesale dealers and jobbers of electrical supplies. Mr. Graham has been in Sioux Falls since 1916.

H. V. ARMSTRONG will succeed Allan S. Graham as manager and superintendent of the Sioux Falls Gas Company, Sioux Falls, S. D. Mr. Armstrong several years ago was connected with the Sioux Falls Gas Company which he left to become general superintendent and manager of the Northern Indiana Gas & Electric Company at Michigan City, Ind. He came to Sioux Falls from Kansas City with his parents when 14 years of age and received his early education in public schools.

Mr. Armstrong's family will move to Sioux Falls from Michigan City in the near future.

JOHN D. SAYER has joined the Missouri Fire Brick Company, St. Louis, Mo., to take charge of the gas works end of the business, in the absence of Mr. Dell, president and general manager who is in very poor health. Mr. Sayer was formerly with the Improved Equipment Company, New York City.

E. G. JONES, manager of the Goshen (Ind.) Gas Company, has resigned to accept the position as manager of the Indiana Light & Fuel Company, operating in Auburn, Garrett and Kendallville. Mr. Jones came to Goshen from Warsaw about two and one-half years ago.

F. A. SCHAEFER, of Lynchburg, Va., has been named as manager of the Goshen Gas Company, Goshen, Ind., succeeding E. G. Jones, resigned.

Brooklyn Borough Co. Advances Gas Rate from $1.15 to $1.40

Alfred M. Barrett, acting Public Service Commissioner, has signed an order permitting the Brooklyn Borough Gas Company to increase its rate for gas from $1.15 per 1,000 cu. ft. to $1.40 during August and September and on Oct. 1 to change from 22 candlepower, or light standard, to 525 B.t.u., or heat standard. It is provided in the order that the saving made by change in the manufacture of gas estimated at 12 cents per 1,000 cu. ft., shall be deducted from the rate.

This is the first change allowed in the city from the light to the heat standard, which is used widely throughout the State and the United States. The new rate will be the highest charged here for gas except by one small company in the Bronx, where the rate is $1.50 because of the sparsely settled territory.

The Brooklyn Borough Company serves the Thirty-first Ward, for which it has a perpetual franchise, and according to 1919 reports served a population of 35,000.

"The company stated," said the commission, "that it would have to suspend operations unless it could obtain more revenue to make up for the increase in the price of oil. I am satisfied that the rate of $1.40 is justified by the increase in the cost of gas oil. When the commission fixed the rate for gas sold by the company at $1.15 the company expected to be able to buy oil for 7¾ cents a gallon, but the price rose to 14 cents.

"It is estimated that about 25 per cent can be saved in oil by the change of standard to the heat unit from the illumination unit. The commission has been advised by its chief gas engineer, William Merrifield, that 95 per cent of the company's customers will get just as good service from 525 B.t.u. gas as they do from 22 candlepower gas. The other 5 per cent, who use open flame gas burners for illuminating, will have to burn more to get the same illumination or change to mantle lamp burners, which will enable them to get the same illumination from less gas."

The company has been fighting for more revenue since 1913, and succeeded in having the rate increased from the legal 80 cents to 95 cents, then to $1.10 and then to $1.15.

In its last application for a higher rate the company stated that it had to use four gallons of oil for each 1,000 cu. ft. of gas, that the price of the oil had doubled since the $1.15 rate was fixed. Coney Island, Sheepshead Bay, Gravesend and the adjacent neighborhoods are served by the company.

Charles H. Tenney & Co. Organization Hold Annual Convention

The annual convention of the Charles H. Tenney & Co. organization, which controls the local company and some 30 other gas light companies in New England, New York and New Jersey, was held in Boston, Mass., June 24 to 26.

The convention brought together the managers, engineers and department heads of the various companies. The program provided for two sessions daily for two days at the Engineers' Club with papers and discussions on present-day problems and practices. Ideas were exchanged on the various methods employed by the different companies. Among the many interesting papers read were: The Future of the Gas Business, Lighting, Cooking, House Heating, Industrial, by F. S. Clifford; Emergency Operation, When Short of Essential Gas Making Materials, by C. E. Paige; Present-day Opportunities for Industrial Gas Installations, by L. B. Crossman; Selling Campaigns, Why They Pay, by Cyrus Barnes; Present-day Purchasing Problems, by G. A. Rust; The Appliance Department as an Asset in Gaining the Good Will of the Public, by H. J. Walton. On the third day all went for an outing to Idlewood Grove, Wenham, Mass., to close the convention.

These annual conventions put in practice the policy of the Tenney company, exemplified in the phrase "Tenney Service," of utilizing cooperative methods in the management of its business and the providing of service to clients.

Asks Gas Rate Increase

Claiming that operating costs have so increased that the company is not making 1 per cent on its investment, Frank Haas, general manager of the Evansville Public Utilities Company, Evansville, Ind., has applied to the Public Service Commission for an increase in its gas rate. The company now charges $1 per 1,000 cu. ft. for gas.

Baltimore Gas Rate Lowered

Gas rates in Baltimore, Md., have been reduced from 75 to 65 cents per 1,000 cu. ft. by the Maryland Public Utilities Commission. Washington consumers recently had their rate increased from 95 cents to $1.25. Commissioner Louis Brownlaw, a member of the Public Utilities Commission of the District, which gave the local gas companies the increase last month, offered some reasons for the difference.

He said that the gas company in Baltimore used a by-product from the coke ovens at Sparrows Point steel plant, and also that in Baltimore there will be but 500 B.t.u. in the quality of gas as against the better standard of 600 units in the District.

The Washington Gas Light Company has been expecting to put up a coal gas plant of its own on Analostan Island, but Howard S. Reeside, president of the company, said at the recent hearing before the Public Utilities Commission that it would cost at least $5,000,000 at present high prices and that it would be difficult to raise that amount of reasonable rates of interest. So it is still buying oil in the open market.

Company Seeks Service Charge

Resolutions have been adopted by the board of directors of the Board of Trade approving the plans of the Cohoes Power & Light Corporation, Cohoes, N. Y., who contemplate going before the Public Service Commission to ask permission to make a service charge of $1 to all consumers, in addition to the charge for gas. This is claimed by the company to be a fair system of charges and one which will tax all alike, the small and large consumer. The company recently issued several statements showing that there was a deficit in their gas department owing to the high cost of materials and labor.

Stock Issue of Troy Gas Co. Approved

The Public Service Commission has authorized the Troy Gas Company, Troy, N. Y., to issue $443,600 in common stock, to be sold at not less than par. The proceeds of the sale of new stock are to be used to reimburse the company's treasury for expenditures from income for the acquisition of fixed assets between Jan. 1, 1913, and Dec. 31, 1917.

Thirteenth Annual Convention of the Canadian Gas Association

The thirteenth annual convention of the Canadian Gas Association will be held in Ottawa Aug. 27 and 28. An invitation is cordially extended to gas men everywhere to attend this meeting.

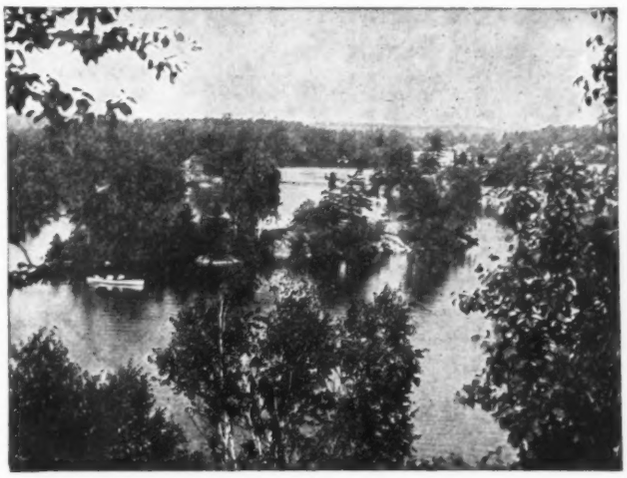
A real live program has been provided on which appears several papers on timely and instructive subjects pertaining to the welfare of the gas industry, and an excellent entertainment program, including sightseeing and a visit to the new Glover West vertical retort plant now in operation in Ottawa.

The convention headquarters will be at the Chateau Laurier Hotel, one of the finest and best equipped hotels in Canada. The rates prevailing are: Single room without bath, $3.50 per day; double room without bath, $4.50; single room with bath, $4.50 and $5; double room with bath, $6 and $7.

For all members who can go to the convention via Toronto, special Pullman train will leave Toronto for Ottawa on the night of Aug. 26, arriving in Ottawa early Friday morning, Aug. 27, in plenty of time for the convention proceedings. The fares and Pullman rates for this train are as follows: Toronto to Ottawa and return, $15.30; one way lower berth, $2.25; compartment, $6.60; drawing room, $7.70.

Reservations for both hotel and train can be made through the secretary, G. W. Allen, 19 Toronto Street, Toronto, Canada, and members and friends are advised to send their wishes in this regard to the secretary as early as possible.

No one can afford to miss a trip to the capital city of Canada, as it offers many things which make a convention worth while and that will never be forgotten by visiting delegates. The association is noted for its hospitality, and all who have attended previous meetings can speak in glowing terms of the reception given to them, and from present indications a record crowd will take advantage of this year's meeting.



AMONG THE ISLANDS OF RIDEAU LAKE NEAR OTTAWA

PARLIAMENT BUILDINGS, OTTAWA. DESTROYED BY FIRE, FEB., 1916. NEW BUILDINGS ARE NEARLY IDENTICAL IN DESIGN

Gas Plant to Be Extended

The directors of the Bridgeton Gas Light Company, Bridgeton, N. J., feel it is necessary to add to the capacity of the plant and have authorized an extension to the retort house and two new benches at an estimated cost of $20,000. It will take twelve months to complete this work.

Court Denies City Right to Intervene in Gas Suit

The city of New York has been refused permission to intervene in the application of the Newton Gas Company for a writ of certiorari on the action of the Public Service Commission in fixing the gas rate for the Second Ward, Queens, in an order signed by Supreme Court Justice Tierney.

The city, in addition to seeking to intervene, asked the court to direct the gas company to turn over to the Bank of Long Island approximately $600,000 for distribution to customers who had paid excess on the 80-cent statutory rate.

The court refused to direct distribution of the fund pending decision of the Public Service Commissioner.

Gas Company Officers Re-elected

At annual meeting of the board of the Milwaukee Gas Light Company, Milwaukee, Wis., Alanson Lathrop was re-elected president. Sheldon J. Glass and Nelson Hulst were re-elected first and second vice-presidents, respectively. Ewald Haase was re-elected secretary-treasurer and R. B. Brown was also re-elected general manager. On the board of directors Alanson Lathrop, Emerson McMillen, S. J. Glass, E. J. Lindsay, R. B. Brown, N. P. Hulst, F. W. Rogers and A. A. Luedtke were re-elected. According to officials of the company there were no plans made for higher gas rates.

AMERICAN GAS COMPANY reports for the first four months of 1920 profits of more than $118,000, after all expenses. This represents an increase of $54,000 over same period last year. For twelve months ended April 30 profits amounted to approximately $400,000, an increase of $193,000 from previous twelve months.

Gas Earnings Increase

Gross earnings of the Philadelphia Company, Philadelphia, Pa., and its subsidiary, the Natural Gas Company, for May totaled $1,135,516, an increase of $188,544 over the corresponding month a year ago. Net earnings after taxes were $538,904, a gain of $153,972.

Western Gas Construction Co. Installing New Equipment in Rocky Mount

With the expansion of its municipal gas plant made imperative by reason of this city's rapid growth, the authorities of Rocky Mount, N. C., have awarded the contract to the Western Gas Construction Company of Fort Wayne, Ind., for the installation of additional equipment. This was done after the proposition had been submitted to the people at a special election and the bond issue voted by a very large majority, the people not only voicing their approval of the administration of the plant but also sensing the need of greater equipment to avoid a serious shortage of gas next winter.

The contract calls for an 8 ft. 6 in. water gas set of the most approved type, together with operating floor, steam-hydraulic elevator, charging barrows, with new high speed blower and motor. There was also ordered constructed a 20 in. gas line to deliver the gas into the present relief holder with the least back pressure.

The arrow shown in the illustration indicates the building in which the gas sets will be located. The Fort Wayne concern has also been directed to construct a new tar tank for this plant.

Followng the most approved method of handling carbureted water gas, the gas will be withdrawn from the relief holder and passed through a new 6 ft. 6 in. water-tube condenser, with 16 in. bypass for same.

The oil storage tanks recently erected by the Western Gas Construction Company was placed in record time and will be of great help in enabling the local company to accumulate a supply of gas oil.

Both of the gas holders shown in the above illustration, together with the two water gas sets within the building, and other apparatus not shown in the picture, were all furnished and installed by the same firm of builders.

Contracts Awarded

THE WESTERN GAS CONSTRUCTION COMPANY of Fort Wayne, Ind., is constructing a battery of four steel purifiers, each box 40 ft. diameter, that are counted on to help out materially in providing more gas for distribution this winter by the Peoples Gas Light & Coke Company of Chicago, Ill. The Western Gas Construction is also furnishing the Faben reversible wooden trays to carry the purifying material.

THE U. G. I. CONTRACTING COMPANY, of Philadelphia, Pa., has recently received an order to install one 11 ft. set of carbureted water gas apparatus in the Paterson (N. J.) Works of the Public Service Gas Company. In addition to the above the Public Service Gas Company will equip the water gas sets in all of its system with the U. G. I. automatic control.

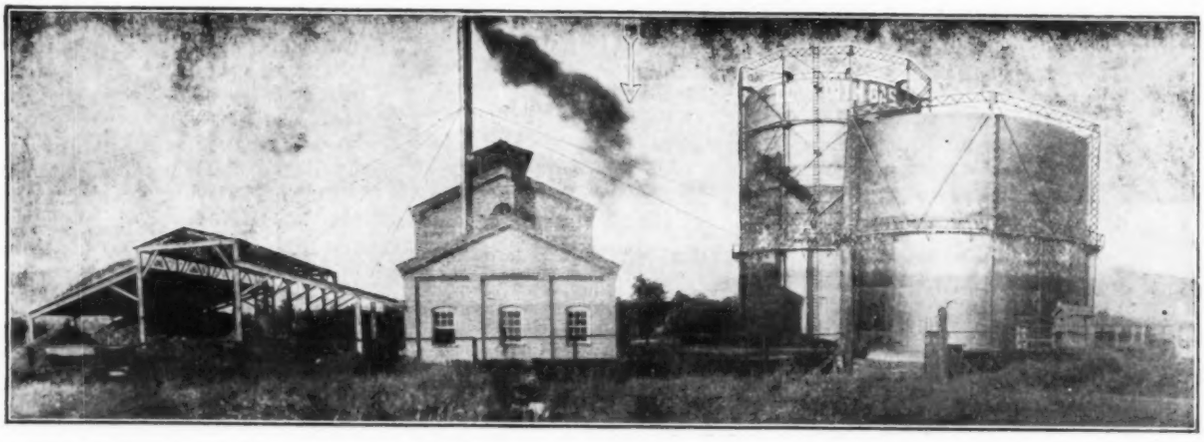
THE U. G. I. CONTRACTING COMPANY, of Philadelphia, Pa., has to date received orders for 70 automatic controls for installation in plants scattered all the way from New England to the Pacific coast.

THE U. G. I. CONTRACTING COMPANY, of Philadelphia, Pa., has recently been awarded a contract by the Consolidated Gas, Electric Light & Power Company of Baltimore, Md., for the installation of 2 12 ft. carbureted water gas sets, each set will be equipped with the U. G. I. automatic control. After a thorough investigation by its engineers, the Baltimore company has also placed orders for additional automatic controls for two of its present sets.

THE J. G. WHITE ENGINEERING CORPORATION announce that they have received commission from the General Chemical Company to build a very large addition to the National Works of the General Chemical Company at Cleveland, Ohio. One of the most important features of the addition will be a sulphate of alumina plant of large capacity.

The engineers have been working on the engineering plans for some months and it is expected that the construction work will be started at an early date.

THE U. G. I. CONTRACTING COMPANY has received its second order for automatic controls from the Philadelphia Gas Works. This order calls for 10 controls, and with the 16 controls previously ordered will equip 26 set for automatic operation. The general trend of gas companies seems to be turned toward operating water gas apparatus automatically, as this method increases efficiency of the apparatus, improves the results and reduces the cost per M of gas made.



HOLDERS AND EQUIPMENT ERECTED AT ROCKY MOUNT, N. C., BY THE WESTERN GAS COSTUCTION COMPANY

All Is in Readiness in Santa Barbara for Series of Experiments Into Manufacture of Gas

Members of the Joint Committee of Efficiency and Economy of Gas of the Railroad Commission of the State of California are in Santa Barbara, Cal., for the purpose of inspecting one of the two experimental laboratories in the State which has been established in the plant of the Southern Counties Gas Company by the committee. All is in readiness for the starting of a series of experiments here into the manufacture of gas.

By a ruling of the State Railroad Commission gas companies of the State are required to furnish gas having a heat unit of 570. Developments and readjustments in the manufacture of gas which resulted from the late war have given facts to the gas engineers of the country which cause them to reconsider what has hitherto been thought the proper best unit for gas.

In England, for instance, it is said, that before the war the artificial gas was manufactured with a heat unit of 600, but the necessities of munition manufacture caused a shortage in the supply of raw materials for the manufacture of gas and the unit was reduced to 400 with a simultaneous reduction in rates. After several months of trial with the new sort of gas it was found that if was more than proportionate to the reduction in the heat value of the gas and an unlooked for wartime economy resulted.

Representatives of the State Railroad Commission of the Pacific Coast Gas Association and of the principal gas companies of the State have formed a joint committee having for its purpose the carrying on of tests to determine just what heat unit standard will enable the oil gas manufacturers to deliver the maximum amount of useful heat energy to the consumer at the lowest cost per unit.

The committee decided to establish two experimental stations, one in Santa Barbara and one in San Jose, and Fred Champion, a gas engineer of the Railroad Commission and now assistant engineer in charge of the local laboratory was sent to Santa Barbara on May 15 to install the necessary apparatus in the local gas plant to conduct the tests.

It is the plan of the joint committee to cover the conditions existing in California thoroughly and several years will be given to the tests if necessary, for it is considered by the gas manufacturers and the railroad commission that there is an urgent need for the best economy in the production and the use of artificial gas during these days of high cost of oil, material and labor.

The investigation will be unusually comprehensive taking in not only the manufacture of gas but the distribution and proper methods of its use.

If a saving in the manufacturing of gas can be brought about as a result of the inquiry the joint committee, under whose auspices it is being conducted, consider that a great public good will have been accomplished for the present annual income of the gas companies in this State is said to be $35,000,000, and a conservation of a part of that would be noticeable.

The organization represented on the joint committee are bearing the expense of the tests, the local company being under no greater expense than other companies in the State, it is announced.

Among the members of the committee inspecting the new Santa Barbara laboratory are: Lester S. Reading, gas and electric engineer of the railroad commission; F. Emerson Hoar, railroad commission field engineer in charge of experiments; E. S. Bryant, assistant field engineer of the commission; Fred Champion, commission engineer in charge of tests; F. S. Wade, superintendent of Southern Counties Gas Company and chairman of the joint committee; A. B. Day, general manager of the Los Angeles Gas & Electric Company and president of the Electric Coast Gas Association; W. M. Henderson, San Francisco; J. C. Creighton, superintendent of gas manufacture, Los Angeles Gas & Electric Company; H. S. Masser, assistant engineer of the railroad commission and secretary of the joint committee; W. C. Williams, mechanical engineer of Southern California Gas Company.

Shrine Week in Portland, Ore.

The accompanying photograph shows the Ruud Automatic and Superbo Automatic Heaters as they appeared in the window of the Portland Gas & Coke Company, Portland, Ore., during Shrine week.

The Shriners from all over the United States were delighted with their reception and Portland was delighted at having them, with their seventy-six bands of music, and even the automatic water heaters got the spirit of celebrating and dressed up in striped skirts of red, yellow and green.

The heaters in their Shrine costume drew considerable attention, and as everybody was in a happy vein it amused the visitors quite a little, but business during Shrine week was taboo.

SEEN DURING SHRINE WEEK

Service Charge Plan Adopted for the First Time in Massachusetts

Manager John J. Kirkpatrick of the Gas & Electric Department of the Springfield Gas Light Company, Springfield, Mass., has announced the innovation of a service charge for gas and electric service, amounting in the minimum to 50 cents a month, and on the largest meters to $1 per month. This is the first service charge system to be adopted in the State of Massachusetts, though it is provided by law in New York and Pennsylvania. It is found by auditors and engineers to be the most equitable distribution of the increased cost of gas and electricity. In its operation it provides that all consumers bear equally the burden of the service given him. Heretofore, under the measured service system, the small user received the advantage of a service system that costs money to operate, and paid nothing for it. The large user pays not only for his gas, but for the service that the smaller user does not pay for. Example: Mr. So and So has a meter installed in his house. It costs the department the same to install that meter as it does any other. Mr. So and So gets the benefit of the service system operated for the benefit of all consumers. Yet he uses only $1 worth of gas in a year. That amount does not pay for the installation of the meter, not to mind his share of the service. There are more than 300 customers who use $1 worth of gas a year or less. Now then comes Mr. Who's-this. He has a meter installed in his home and uses $36 worth of gas a year. He is the lowest in rating of the profitable customers, but nevertheless a profitable customer. He pays more than his just share for service, because the $1 a year pays nothing. Now the service charge makes all pay alike. If the meter is installed and the service maintained, each customer must pay an equal share. It is a logical system, because it makes just the present unjust payment of the service charges.

As a matter of fact, proven by department statistics 40 per cent of the customers on the books of the gas and electric department are unprofitable, because of the small amount of gas used. The large users of gas, or the 60 per cent must pay for the service given the 40 per cent. It has been unfair. Now, under the new service cost plan, the 100 per cent pay equally for the service. The service is maintained for all, and all are entitled to it. They are charged at the old rates for the gas used, and the department gets the increased revenue from tne service charge.

It will work out in this way. Every customer will receive a bill, the staple charge of which is 50 cents. Added to this will be the cost of the gas used, be it great or small in amount, at the old rate. The figures show that it costs $6.98 per customer to serve, and 81 cents per customer for making gas under the present system. Under the service plan, the price for making gas will ultimately be reduced. The cost to the department for making gas for the 300 or more small users (those using $1 worth a year or less) is $22.28 per 1,000 cu. ft. For the big user (the profitable customer) it cost 82 to 91 cents per 1,000 cu. ft. Yet under the present plan the small user gets gas for the same amount of money the big user pays, and he does not help pay for the service. In round figures 6,000 customers are not paying for the service they get, and the balance of the customers are paying for the 6,000.

The system will effect another saving. To increase gas rates on measured service the increase would amount to 33 1-3 per cent. The increase will amount to more than that under the service cost plan to small users because the annual bill is smaller. For the big users the increase will be less. If the increase was to be charged on measured service, it would cost close to $100,000 to change over the meters. Under the service cost plan the meters need not be changed. A few of the smaller users will probably have their meters taken out, rather than pay the extra $6 a year for service. This will give the department meters for other customers, and it will save on investment, as new meters cost twice as much to-day as they did a few years ago.

Big Gasser in Oklahoma

A gas well estimated at 20 million feet was brought in near Lawton, Okla., by the Best of All Oil Company. The well is about five miles northwest of the new Empire field and promises to cause increased development in that section.

Annual Meeting and Election of Officers of Bridgeton Gas Light Co.

At the annual meeting of the Bridgeton Gas Light Company, Bridgeton, N. J., the stockholders re-elected the following directors:

Bloomfield H. Minch, Samuel P. Fithian, Edward P. Bacon, William C. Mulford, Henry A. Jorden.

There were 1,590 shares of stock represented at the meeting and all were voted unanimously for each of the directors.

The directors organized by re-electing these officers:

President, Bloomfield H. Minch; vice-president, Samuel P. Fithian; secretary and auditor, William C. Mulford; superintendent and treasurer, Jacob B. Jones.

President Minch in his annual report treated of matters which are of interest to Bridgeton, for this public utility touches every one at some point. He pointed out that the cost of manufacturing gas had increased during the last three or four years until the company reached a crisis. Some were optimists and thought there would be a price reaction to lighten the burden, but prices have continued to climb and the situation is now critical. It is no longer merely a problem to vex the owners but a matter of public welfare.

Back in 1917 the effort was to meet the situation by rigid economies and increasing business, but now the maximum capacity of the plant has been reached. Notwithstanding almost insurmountable difficulties the entire plant is in the best operating condition. There are 3,531 consumers and thirty miles of mains.

The service is seriously threatened during the coming winter by lack of plant capacity. In March the company contracted for its supply of coal at $3.50 the net ton, but on account of lack of railroad transportation not more than fifty per cent of the supply for current needs has been received. It has been necessary to rob the reserve storage when the company should be creating a reserve.

There has been an increase of 120 per cent in the cost of manufacture and the cost to the consumer has been increased only thirty per cent. An application will soon be filed with the State Board of Public Utilities for an increase in rates which will allow this service to be continued and also for an adequate return to the stockholders.